



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,639	03/17/2004	Chun-Hsiung Wang	WNCP0005USA	2638
27765 7590 04/20/2007 NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			EXAMINER DEAN, RAYMOND S	
			ART UNIT	PAPER NUMBER
			2618	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		04/20/2007	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/20/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com  
Patent.admin.uspto.Rcv@naipo.com  
mis.ap.uspto@naipo.com.tw

## Office Action Summary

Application No.

10/708,639

Applicant(s)

WANG, CHUN-HSIUNG

Examiner

Raymond S. Dean

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 10 is objected to because of the following informalities: "electric device" line 2 should be "electronic device". Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5 – 8, 10 – 13, 15 – 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuisma (EP 521,609).

Regarding Claim 1, Kuisma teaches a secondary communication module of a wireless communication device, wherein the wireless communication device provides a first protocol wireless communication (Col. 2 lines 37 – 49, 4 lines 24 – 41) and the secondary communication module is detachably installed on the wireless communication device (Abstract), the communication module comprising: a housing (Figures 1 – 3); a battery installed inside the housing for providing power to the wireless communication device (Col. 4 lines 24 – 32); a radio frequency (RF) circuit installed inside the housing for converting RF signals and baseband signals (Cols. 3 lines 54 – 58, 4 lines 1 – 4, in order for the digital signal processing to occur the signals

Art Unit: 2618

will need to be converted to baseband) and for providing a second protocol wireless communication (Col. 2 lines 37 – 49); and a baseband circuit connected to the RF circuit for processing the baseband signals (Cols. 3 lines 54 – 58, 4 lines 1 – 4, the digital signal processing circuit processes the baseband signals).

Regarding Claim 5, Kuisma teaches all of the claimed limitations recited in Claim

1. Kuisma further teaches wherein the first protocol is one of GSM, GPRS, PHS, CDMA, and 3G protocols (Col. 2 lines 43 – 49, CDMA).

Regarding Claim 6, Kuisma teaches all of the claimed limitations recited in Claim

1. Kuisma further teaches wherein the second protocol is one of GSM, GPRS, PHS, CDMA, and 3G protocols (Col. 2 lines 43 – 49, CDMA).

Regarding Claim 7, Kuisma teaches all of the claimed limitations recited in Claim

1. Kuisma further teaches wherein the wireless communication device and the secondary communication module communicate with each other by AT commands (Col. 3 lines 38 – 58, 4 lines 1 – 4, typical modems communicate via the AT command set).

Regarding Claim 8, Kuisma teaches all of the claimed limitations recited in Claim

1. Kuisma further teaches wherein the RF circuit comprises an RF receiver for converting RF signals into baseband signals and an RF emitter for converting baseband signals into RF signals (Cols. 3 lines 54 – 58, 4 lines 1 – 4, the signals will be demodulated and downconverted to baseband for digital signal processing and modulated and upconverted to RF for transmission).

Regarding Claim 10, Kuisma teaches an external communication module for connecting to an electronic device to provide a first protocol wireless communication to the electronic device (Col. 2 lines 37 – 49, Kuisma renders the scenario of the mobile device with the first supplementary module in place which would provide a first protocol such as CDMA), the communication module comprising: a battery (Col. 4 lines 24 – 32); a first RF circuit for converting RF signals and baseband signals (Cols. 3 lines 54 – 58, 4 lines 1 – 4, in order for the digital signal processing to occur the signals will need to be converted to baseband); and a first baseband circuit connected to the first RF circuit for processing the baseband signals (Cols. 3 lines 54 – 58, 4 lines 1 – 4, the digital signal processing circuit processes the baseband signals), wherein the battery provides power to the first RF circuit and the first baseband circuit (Col. 4 lines 24 – 32).

Regarding Claims 11, 16, Kuisma teaches all of the claimed limitations recited in Claims 10, 15. Kuisma further teaches wherein the electronic device comprises a second antenna (Col. 3 lines 42 – 47), and the first RF circuit of the external communication module connects to the second antenna for emitting and receiving RF signals through the second antenna (Cols. 3 lines 49 – 58, 4 lines 1 – 4, the additional modules do not have antennas thus said modules connect to the antenna of the basic module).

Regarding Claim 12, Kuisma teaches all of the claimed limitations recited in Claim 11. Kuisma further teaches wherein the electronic device and the external communication module are controlled by a main control interface (Col. 2 lines 23 – 36,

Art Unit: 2618

the basic module and the supplementary modules communicate via some kind of interface control interface thus enabling the phone to operate in using a particular mode or protocol).

Regarding Claim 13. Kuisma teaches all of the claimed limitations recited in Claim 12. Kuisma further teaches wherein the electronic device comprises a second RF circuit and a second baseband circuit to provide a second protocol wireless communication (Cols. 3 lines 54 – 58, 4 lines 1 – 4, lines 24 – 41), the second RF circuit connects to the second antenna for emitting and receiving RF signals (Col. 3 lines 42 – 47), and the battery of the external communication module provides power to the electronic device (Col. 4 lines 24 – 32).

Regarding Claim 15. Kuisma teaches a communication system comprising: an electronic device having a second RF circuit and a second baseband circuit to provide a second protocol wireless communication (Cols. 2 lines 37 – 49, 3 lines 54 – 58, 4 lines 1 – 4, lines 24 – 41); and an external communication module having a battery (Col. 4 lines 24 – 32), a first RF circuit for converting RF signals and baseband signals (Cols. 3 lines 54 – 58, 4 lines 1 – 4, in order for the digital signal processing to occur the signals will need to be converted to baseband), and a first baseband circuit to provide a first protocol wireless communication (Col. 2 lines 37 – 49), wherein the external communication module is detachably connected to the electronic device (Abstract, Col. 4 lines 24 – 41) and the battery of the external communication module supplies power to the electronic device and the external communication module (Col. 4 lines 24 – 41).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 – 4, 9, 14, 17 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuisma (EP 521,609) in view of Souissi (US 6,785,556).

Regarding Claim 2, Kuisma teaches all of the claimed limitations recited in Claim

1. Kuisma does not teach an antenna installed inside the housing for emitting and receiving RF signals.

Souissi teaches an antenna installed inside the housing for emitting and receiving RF signals (Figure 2A, Col. 5 lines 42 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the supplementary modules of Kuisma with the software configurable multimode modem architecture of Souissi for the purpose of providing a detachable multimode module with minimal need for additional hardware resulting in a lower cost as taught by Souissi.

Regarding Claim 3, Kuisma teaches all of the claimed limitations recited in Claim

1. Kuisma does not teach wherein the module is connected to a computing device through a cradle and provides wireless communication to a computing device through a cradle and provides wireless communication to the computing device.

Souissi teaches wherein the module is connected to a computing device through a cradle and provides wireless communication to a computing device (Figure 2A, Col. 4 lines 62 – 64, the interface that enables the host computer to connect to the RF modem is acting as the cradle).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the supplementary modules of Kuisma with the software configurable multimode modem architecture of Souissi for the purpose of providing a detachable multimode module with minimal need for additional hardware resulting in a lower cost as taught by Souissi.

Regarding Claim 4, Kuisma in view of Souissi teaches all of the claimed limitations recited in Claim 3. Souissi further teaches wherein the cradle is connected to the computing device via a USB port (Col. 1 lines 60 – 63).

Regarding Claims 9, 14, Kuisma teaches all of the claimed limitations recited in Claims 1, 10. Kuisma does not teach a memory installed inside the housing for storing data.

Souissi teaches a memory installed inside the housing for storing data (Col. 5 lines 21 – 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the supplementary modules of Kuisma with the software configurable multimode modem architecture of Souissi for the purpose of providing a detachable multimode module with minimal need for additional hardware resulting in a lower cost as taught by Souissi.



Art Unit: 2618

Regarding Claim 17, Kuisma teaches all of the claimed limitations recited in claim 15. Kuisma further teaches wherein the electronic device comprises a second antenna (Col. 3 lines 42 – 47), the second RF circuit of the electronic device is connected to the second antenna to emit and receive the RF signals through the second antenna (Cols. 2 lines 37 – 49, 3 lines 42 – 47, 4 lines 24 – 41)

Kuisma does not teach wherein the external communication module comprises a first antenna, and the first RF circuit of the external communication module is connected to the first antenna to emit and receive the RF signals through the first antenna.

Souissi teaches wherein the external communication module comprises a first antenna (Figure 2A, Cols. 4 lines 62 – 64, 5 lines 42 – 43), and the first RF circuit of the external communication module is connected to the first antenna to emit and receive the RF signals through the first antenna (Figure 2A, Col. 5 lines 42 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the supplementary modules of Kuisma with the software configurable multimode modem architecture of Souissi for the purpose of providing a detachable multimode module with minimal need for additional hardware resulting in a lower cost as taught by Souissi.

Regarding Claim 18, Kuisma in view of Souissi teaches all of the claimed limitations recited in claim 17. Kuisma further teaches wherein the electronic device and the external communication module are controlled by a main control interface (Col. 2 lines 23 – 36, the basic module and the supplementary modules communicate via

Art Unit: 2618

some kind of interface control interface thus enabling the phone to operate in using a particular mode or protocol).

Regarding Claim 20, Kuisma teaches a communication system comprising: an electronic device having a power source (Col. 4 lines 24 – 41); an external communication module connecting to the electronic device for providing a first protocol wireless communication (Col. 2 lines 37 – 49, Kuisma renders the scenario of the mobile device with the first supplementary module in place which would provide a first protocol such as CDMA), the external communication module comprising a battery (Col. 4 lines 24 – 41), a first RF circuit (Col. 3 lines 54 – 58), and a first baseband circuit (Cols. 3 lines 54 – 58, 4 lines 1 – 4, in order for the digital signal processing to occur the signals will need to be converted to baseband); and a connecting device for connecting the electronic device with the external communication module for providing electrical signal transmission there between (Cols. 2 lines 23 – 49).

Kuisma does not teach an external communication module comprising an antenna and wherein a RF circuit connects to the antenna to emit and receive RF signals.

Souissi teaches an external communication module comprising an antenna (Figure 2A, Cols. 4 lines 62 – 64, 5 lines 42 – 43) and wherein a RF circuit connects to the antenna to emit and receive RF signals (Figure 2A, Col. 5 lines 42 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the supplementary modules of Kuisma with the software configurable multimode modem architecture of Souissi for the purpose of providing a

Art Unit: 2618

detachable multimode module with minimal need for additional hardware resulting in a lower cost as taught by Souissi.

Regarding Claim 21, Kuisma in view of Souissi teaches all of the claimed limitations recited in claim 20. Kuisma further teaches wherein the battery of the external communication module receives power from the power source of the electronic device through the connecting device (Col. 4 lines 24 – 41).

Regarding Claim 22, Kuisma in view of Souissi teaches all of the claimed limitations recited in claim 20. Kuisma further wherein the external communication module is controlled by a main control interface of the electronic device (Col. 2 lines 23 – 36, the basic module and the supplementary modules communicate via some kind of interface control interface thus enabling the phone to operate in using a particular mode or protocol).

Regarding Claims 19, 23, Kuisma in view of Souissi teaches all of the claimed limitations recited in claims 18, 22. Kuisma further teaches wherein the electronic device comprises a second memory (Col. 3 lines 42 – 49, there is memory for the storage of code that runs the microprocessor). Souissi further teaches wherein the external communication module comprises a first memory (Col. 5 lines 21 – 25).

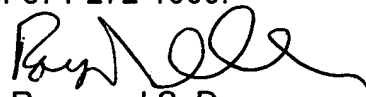
### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

Art Unit: 2618

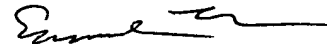
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Raymond S. Dean

April 2, 2007



EDWARD F. URBAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600